

IDHS DIVISION OF TRAINING
MACHINERY TECHNICAIN LEVEL
PRACTICAL SKILLS AND EXAMINATION HANDBOOK

Title
Evaluate Conditions

Skill Sheet#1

NFPA 1670, 2009 Edition, 12.4.2(1)

Directions

For this skills evaluation checklist, candidate shall Evaluate existing and potential conditions at machinery search and rescue incident. Candidate shall evaluate an incident involving heavy machinery.

Equipment & Materials

- Proper PPE
- Heavy machinery props
- Marking devices (cones, tape, rope)

Task Steps	
1.	Candidate shall verbally report to the evaluator a scene size-up that includes <ul style="list-style-type: none">• Identify Scope and Magnitude of the incident.• Risk Benefit analysis (body recover vs. rescue)• Determine number and size of machines affected• Identify integrity and stability of machines• Identify the number of known or potential victims• Access to the Scene• Identify the hazards of disrupted or exposed utilities, standing or flowing water, mechanical hazards, hazardous materials, electrical hazards, and explosives.• Exposure to traffic• Explain environmental factors• Explain available versus necessary resources
2.	Candidate is wearing proper PPE for operating at the incident (minimum) <ul style="list-style-type: none">• Eye protection• Hearing protection• Helmet (rescue type)• Extrication or structural FF gloves

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	<ul style="list-style-type: none">• BSI (body substance isolation)• Long sleeves & long pants Steel toe shoes or boots
3.	Candidate shall Establish operational zones (i.e. hot, warm, cold) and site security

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Title

Stabilization in Advance Machine Elements

Skill Sheet#2

NFPA 1670, 2009 Edition, 12.4.2(3)

Directions

For this skills evaluation checklist, candidate shall stabilize in advance machine elements at machinery search and rescue incidents involving heavy machinery.

Equipment & Materials

- Proper PPE
- Pneumatic high-, medium-, or low-pressure lifting bags.
- Cribbing, chocks, and wedges
- Heavy machinery props
- Shackles and slings
- Chains, wire cables, pulleys

Task Steps	
1.	Candidate shall establish anchor over one's head
2.	Demonstrate Shoring (pneumatic struts) for stabilizing heavy machines
3.	Demonstrate lifting machinery prop with pneumatic high-, medium-, or low pressure lifting bags.

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Title
Extrication and Disentanglement
(Heavy Machinery)

Skill Sheet#3

NFPA 1670, 2009 Edition, 12.4.2(2, 4)

Directions

For this skills evaluation checklist, candidate shall demonstrate performing extrication and disentanglement operations from large machines. Using all specialized search and rescue equipment immediately available and in use by AHJ.

Equipment & Materials

- Proper PPE
- Cribbing and chocks
- Power tools
- Heavy machinery props
- Chains, wire cable, pulleys
- Assorted hand tools

Task Steps	
1.	Candidate shall verbally provide to the evaluator the following points on usage of heavy wreckers or crane services to assist at incidents involving large machinery. <ul style="list-style-type: none">• How to determine the correct size of wrecker or crane needed• Determine staging or placement of wrecker or crane• Determine the rescue action plan for the use of the wrecker or crane
2.	Demonstrate the use, care, and maintenance of power winches used at an incident involving large machinery
3.	Perform disentanglement through both primary and secondary access points through the use of available power tools
4.	Candidate perform extrication and disentanglement skills on props correctly and safely.
5.	Victim successfully extricated from machinery